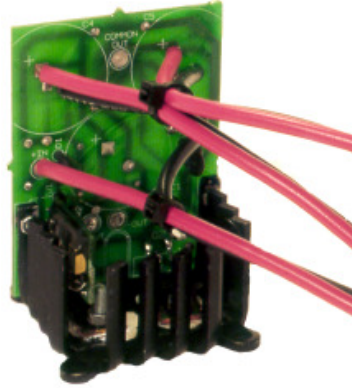


# DC Alternating Flasher

## For 12V Warning Light Applications



### High reliability, low cost, long life

When specifications call for DC alternating flashing, incandescent or LED lights, reasonable cost, and challenging operating conditions ... why use anything else? This DC Alternating Flasher stands up to the extreme conditions often encountered in the traffic control environment where others may soon need replacement.

High reliability begins with open frame circuit construction and wide spacing between heat-generating components for maximum convection cooling in high ambient temperatures. A black anodized heat sink with 1-inch slanted fins directs air to the center of the assembly for a more turbulent flow.

Complementary-configured MOSFETs (the main stress-bearing electrical component) operate at a mere 6 percent of rated capacity as massive extra margin for meeting difficult conditions. They also deliver a high 98 percent conversion efficiency to conserve battery life.

State-of-the-art control circuitry maintains a constant flash rate over normal battery operating range, while low battery (below 11V) activates a

decreased flash rate as a visual indicator. In the event one lamp fails, independent drive circuits keeps the other one flashing.

A transorb which fires at 32 vdc protects against aberrant surge voltage such as might be caused by a nearby lightning strike. A premium-cost tantalum timing capacitor greatly enhances long-term flash stability under temperature and age stress.

A conformal coating of premium silicone seal adds an important extra barrier against moisture, corrosive fumes, and other contaminants. Electrical connections are 100 percent soldered to practically eliminate the possibility of an open circuit.

Included mounting tabs allow attachment of the unit to almost any flat surface. Or in many instances, this low-weight component can be left hanging in the loom for fast field installation and improved cooling.

The standard flash rate of 60 flashes/minute is hand trimmed for extra accuracy, while all custom rates are available. No adjustment is needed or even possible.

### Features

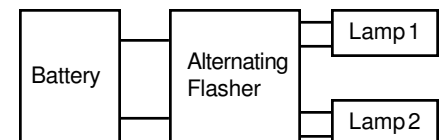
- Drives incandescent and LED lights
- Withstands high ambient temperatures and severe electrical stress
- State-of-the-art control circuitry, transorb protection, tantalum timing capacitor
- Standard 60 flashes/minute rate, all customs
- All connections 100 percent soldered
- Silicone sealed for extra corrosion protection

### Applications

- Highway beacons
- Warning lights
- Highway signs
- Mobile installations
- Towers

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### Wiring Diagram



# Technical Specifications

## Mode of Operation

Complementary configured MOSFETs alternately conducted by proprietary control circuitry

## Supply Voltage Range

*12V Battery:* Operates from a 8 to 16 vdc battery source. Can take up to 19 vdc (absolute maximum) for a short time. Battery or filtered dc only

## Duty Cycle/Flash Rate

Duty cycle is 50%/50%, and flash rate is 60 (or custom) flashes/minute +/- about 1 flash

## Continuous Output Current

4A up to 125 F (52 C) ambient, 75% of rated current up to 150 F (66 C)

## Ambient Temperature Range

- 40 F (- 40 C) to 150 F (66 C) with restrictions noted

## Heat Sink

Heat sink is electrically isolated from voltage and acts as a circuit enclosure. Temperature rise under maximum load is about 15 F (6 C) above ambient

## DC-DC Conversion Efficiency

About 98% at full rated current

## Reverse Polarity Protection

Input leads can be reverse connected without damage (user installed 10A fuse blows). Fuse link on rear side of circuit board blows if battery is reverse connected and user-installed fuse is not in place

## Transient Protection

Control circuitry protected via double resistive/capacitive filtering, zener diode clamping. MOSFET's protected with 500W transorb which fires at 32 vdc nominal

## Size

About 1.75" (45 mm) square footprint, by 2.5" (45 mm) high

## Weight

About 4 oz

## Voltage Drift

Nil with steady input voltage

## Power Dissipation of Drive Circuitry

No-load current draw is about 16mA.

## Accessories Included

Marked leads, detailed installation instructions

## Warranty and Disclaimer:

Although Manufacturer warrants the goods, so far as the same are of its manufacturer, against defects in materials and workmanship under normal use and service for which they were designed for a period of 90 days after invoice date, Manufacturer's obligation under this warranty are limited, at its option, to the replacement of the part or parts determined to be defective or to the refund of the purchase price.

Claims made in this data sheet are based on extensive testing and are believed to be true. Manufacturer shall under no circumstances be liable for any special, indirect, incidental, or consequential damages owing to failure of the goods. Manufacturer makes no warranty of fitness for a particular purpose or merchantability or any other warranty, oral or written, expressed or implied, except as specifically set forth herein. Do not use ZANE products as critical components in life support devices or systems, aircraft, or other hazardous applications. Quotation, order acknowledgment, purchase, etc. does not grant or imply a license under any present or future patents owned by seller except to extent purchases are made from seller.

Any goods returned under warranty must be returned freight prepaid to ZANE International Inc., Minden, NV.

### DC Alternating Flasher

Part #	UPC Item Number	Input Voltage	Maximum Current
AAF-48R-12V	01100	12V	4A